UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,348	09/29/2000	Steven M. Bennett	42390P9238	2192

7590   03/14/2005

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EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/676,348	BENNETT, STEVEN M.
	Examiner	Art Unit	
	Martin Lerner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 November 2004</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>6,7,9,15,16,18 and 26</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>6,7,9,15,16,18 and 26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 August 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claims 7, 16, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claim 26, the term "the PIM database" lacks antecedent basis and is unclear. The Specification does not say what "PIM" is an abbreviation for. Nor would one having ordinary skill in the art know what "PIM" is referring to. Thus, the scope of the claim is unclear.

Regarding claims 7 and 16, it is unclear whether the term "includes" implies that every one of the e-mail information, voice mail information, calendar information, and location information are contained within the database, or whether only any one of these elements is contained within the database. The term "includes" generally is taken to imply that all of the enumerated elements are present, but it is unclear whether that is what Applicant intends here. Thus, the scope of these claims is indefinite.

Claim Objections

3.   Claims 6, 7, and 9 are objected to because of the following informalities:

In claims 6, line 12, "phrased" should be –phrases––. Appropriate correction is

required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 6, 7, 9, 15, 16, 18, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over *Kuhn et al.* in view of *Kanevsky et al.*

Regarding independent claims 6 and 15, *Kuhn et al.* discloses a method, system,

and computer program, comprising:

"receiving digitized voice data from a user" – speech input supplied through

microphone 26 is first digitized (column 3, lines 66 to 67: Figure 2);

"processing the voice data to determine one or more phrases recognized as the

digitized voice data provided by the user based on a currently active recognition

grammar" – the output of speech recognizer module 40 is supplied to the natural

language parser 42 working in conjunction with a set of goal oriented grammars 44

(column 3, line 66 to column 4, line 10: Figure 2); in some instances, the natural

language parser will immediately identify a program the user is interested in watching,

but in other instances, there may be multiple choices or possibilities (column 4, lines 38

to 54: Figure 2); the set of grammars have context-sensitive grammar rules for each

topic, e.g. grammar A 240 and grammar B 242 ("a currently active recognition

grammar") (column 6, lines 50 to 65: Figure 4);

"when one or more phrase is recognized as the digitized voice data provided by

the user as a result of voice-recognition uncertainty, using user-specific context

information to choose a recognized phrase from the one or more phrases recognized as

the digitized voice data" – automatic speech recognition process block 217 generates

word confidence vector 268 which indicates how well words in input sentence 218 were

recognized ("voice-recognition uncertainty"); dialog manager 130 generates dialogue

context weights 269 by determining the state of the dialog by asking the user about a

particular topic; due to this request, dialog manager 130 determines what the user said

(column 7, lines 18 to 29: Figure 4); the dialog manager has a user profile data store 56,

which stores information about the user's previous information selections; thus, this data

store helps the dialog manager tune its prompts to best suit the user's expectations

(column 4, lines 48 to 54: Figure 2); N-best processor 270 selects the highest-scoring

candidate as what the user intended (column 7, lines 59 to 64: Figure 4); the claim

limitation does not exclude additionally obtaining "user-specific context information" via

dialog prompts.

Regarding independent claims 6 and 15, *Kuhn et al.* omits an elimination

procedure to select a final phrase, but *Kanevsky et al.* discloses a method, system, and

computer program, comprising:

"selecting elements of uncertainty within the one or more recognized phrases" –

as each ambiguity is encountered, recognition is suspended to allowing presenting

questions to the user to discriminate between potential selection classes; an

intermediate question is posed to discriminate between "meet at heaven" and "meet at

seven" (column 3, lines 27 to 39);

"selecting the user-specific context information from a database based on the

elements of uncertainty" – classification questions are posed based upon classification

questions concerning space or time relationships, whether the phrase describes a noun,

verb, or adjective, etc. (column 3, lines 40 to 63); potential final alternative classes may

be selected to include a personal characteristics class profile ("user-specific context

information") (column 4, lines 37 to 45);

"eliminating phrases within the one or more recognized phrased based on the

user-specific context information regarding the elements of uncertainty" – based on the

user's response, intermediate decoding alternatives are narrowed, eliminating choices

that are incongruous with the user's response (column 5, lines 4 to 9: Figure 2: Step

132);

"selecting a final phrase as the recognized phrase once all other phrases within

the one or more recognized phrases are eliminated" – if all ambiguities have been

resolved, then a final decoding output is produced using the narrowed set of

intermediate decoding alternatives; otherwise, the procedure iterates (column 5, lines 8 to 13: Figure 2: Step 134).

Regarding independent claims 6 and 15, *Kanevsky et al.* teaches a system and method for resolving decoding ambiguity via dialog has the advantage of improving language decoding performance and accuracy. (Column 1, Lines 50 to 53) It would have been obvious to one having ordinary skill in the art to utilize the system and method for resolving decoding ambiguity to iteratively eliminate phrases until a final phrase is obtained as taught by *Kanevsky et al.* in the multi-modal dialog unit of *Kuhn et al.* for the purpose of improving language decoding performance and accuracy.

Regarding claims 7 and 16, *Kanevsky et al.* teaches selection classes may include classification questions about space relationships (column 3, lines 40 to 63), corresponding to "location information", which is one of the enumerated alternatives.

Regarding independent claim 26, *Kuhn et al.* discloses a system, comprising:

"a voice interface to receive digitized voice data from a user" – speech input supplied through microphone 26 is first digitized (column 3, lines 66 to 67: Figure 2);

"a voice recognition engine processes the voice data to determine one or more phrases recognized as the digitized voice data provided by the user based on a currently active recognition grammar" – the output of speech recognizer module 40 is supplied to the natural language parser 42 working in conjunction with a set of goal oriented grammars 44 (column 3, line 66 to column 4, line 10: Figure 2); in some

instances, the natural language parser will immediately identify a program the user is

interested in watching, but in other instances, there may be multiple choices or

possibilities (column 4, lines 38 to 54: Figure 2); the set of grammars have context-

sensitive grammar rules for each topic, e.g. grammar A 240 and grammar B 242 ("a

currently active recognition grammar") (column 6, lines 50 to 65: Figure 4);

"a database containing user context information" – the dialog manager has a

user profile data store 56, which stores information about the user's previous

information selections; thus, this data store helps the dialog manager tune its prompts to

best suit the user's expectations (column 4, lines 48 to 54: Figure 2);

"a user context natural language processor having a capability to select user-

specific context information from the PIM database and use the user-specific context

information to choose a recognized phrase from the one or more phrases recognized as

the voice data when the voice recognition engine recognized more than one phrase as

the voice data provided by the user" – the output of speech recognizer module 40 is

supplied to the natural language parser 42 (column 3, line 67 to column 4, line 2: Figure

2); automatic speech recognition process block 217 generates word confidence vector

268 which indicates how well words in input sentence 218 were recognized; the dialog

manager has a user profile data store 56, which stores information about the user's

previous information selections; thus, this data store helps the dialog manager tune its

prompts to best suit the user's expectations (column 4, lines 48 to 54: Figure 2); dialog

manager 130 generates dialogue context weights 269 by determining the state of the

dialog by asking the user about a particular topic; due to this request, dialog manager

130 determines what the user said (column 7, lines 18 to 29: Figure 4); N-best

processor 270 selects the highest-scoring candidate as what the user intended (column

7, lines 59 to 64: Figure 4); the claim limitation does not exclude obtaining "user-specific

context information" via a dialog.

Regarding independent claim 26, and claims 9 and 18, *Kuhn et al.* discloses an

N-best processor selects the N-best candidates based upon associated scores

("elements of uncertainty") by a plurality of passes (column 7, line 60 to column 8, line

5); *Kanevsky et al.* teaches personal characteristics class directed to sex, age,

profession or personal profile (column 4, lines 42 to 44), containing customer related

information such as the customer's buying habits, buying needs, and customer's

profession (column 5, lines 44 to 53) ("user-specific context information"), where an N-

best list (column 4, lines 7 to 14) narrows the set of ambiguities to select a final

decoding output from a narrowed set of intermediate decoding alternatives (column 5,

lines 3 to 13: Figure 2).

Response to Arguments

6.   Applicant's arguments filed 19 November 2004 have been considered but are

moot in view of the new ground of rejection.

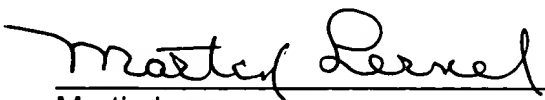### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
3/10/05

Martin Lerner
Examiner
Group Art Unit 2654